long as astronomers can induce Governments to send them to China and Peru the necessity of observing transits of Venus will never come to an end, and the distance of the sun from the earth will never be definitely settled.

It so happens that a transit of Mars is just about as useful for astronomical purposes as a transit of Venus. After the Government had sent astronomers all over the earth to observe the transit of Venus in 1874, the public was astonished to learn that a transit of Mars was to take place a year or two later. Why, it was asked, had not the astronomers, who insisted that a transit of Venus was an event happening only once a century, mentioned that a transit of Mars was also close at hand? The feeling that the public had been trifled with by this suppression of the fact of the approaching transit of Mars was so general that only the boldest astronomers ventured to ask the Government to send them to Paris or Rome or up the Nile to observe the latter event.

A little later it was announced that another transit of Venus was to take place in the present year. This was too much. Had the astronomers ventured to ask the Government for two or three men-of-war to convey them all over the world, and an enormous appropriation to supply them with telescopes, theodolites, ivory chips, and other instruments, all on the pretext that the observation of the present transit is absolutely necessary in order to determine the distance of the sun, they would have been met with an outburst of indignation hardly less violent than that aroused by the River and Harbor bill.

It has, therefore, been decided by the astronomers to stay at home. They have suddenly discovered that their own observatories afford all necessary facilities for observing the transit. They have even gone further, and kindly informed the people that this is what theatrical men would call a great popular transit, which anybody can observe at the low price of a piece of smoked glass. Between 9 and 2 o'clock to-day the possessor of smoked glass can enjoy the thrilling sight of a black speck, resembling a fly, in the act of creeping across the sun's disk, and can then take a slate and pencil and guess at the distance of the sun, being careful to make it not less than ninety-two and not more than ninety-five millions of miles. This is the first time within the memory of man that the unlearned common people have been permitted to observe a transit, and it is the first revelation of the fact that a transit can be seen through smoked glass.

It must seem strange even to the most thoughtless and unsuspicious of men that the transit of to-day should, according to the astronomers, differ so widely from all other transits. Hitherto the most remarkable feature of a transit of Venus has been the assumed impossibility of seeing it at home. No matter where an astronomer might live, the transit was never visible within a thousand miles of his home. The New-York astronomers had to go to Pekin to observe a transit; the Chinese astronomers had to go to Australia, and the Australian astronomers had to go to Europe. Why is it that the present transit can be seen here and seen by unlearned people through cheap smoked glass instead of costly telescopes? Is it not a singular coincidence that the transit which is thus easily visible is precisely the one which astronomers are not to be sent thousands of miles to observe? He would be indeed a credulous person who should regard this coincidence as a mere matter of chance. The opinion that all transits of Venus may be observed at home and through smoked glass will be as universal to-day as are blackened noses and eye-brows, and there will be no astronomer hereafter who will venture to dissent from this opinion.

THE TRANSIT.

To-day's transit of venus is in several respects a remarkable one. It is the first transit which astronomers have been content to observe from their own observatories. Of course there are astronomers—chiefly new ones—who have asked their respective Governments to send them to distant and desirable places on the pretext of observing the transit, but as a rule the astronomers have staid at home.

The explanation of this fact undoubtedly is that the astronomers over-reached themselves on the occasion of the transit of 1874. They then asserted that a transit of Venus only happens about once in a century, and that it is an affair of tremendous importance, inasmuch as it affords data for calculating the distance of the sun. People have been so accustomed to accept the assertion of astronomers without question that no one has ventured to ask how the passage of Venus across the sun's disk enables any one to calculate the distance of the latter body from the earth. It would not, however, have made much difference if such a question had been asked, for it would have been answered with so many scientific terms that no one could possibly have comprehended the answer. Doubtless it is true that the sun's distance can be found by observing the transit of Venus, but it so happens that the observations made during one transit always show that the sun's distance is either greater or less than it was at the time of the last previous transit. The astronomers always maintain that their last observations are exceptionally accurate, but that they must be tested by further observations of the next transit. It has finally become evident to all thinking people that so